

[54] SEPARABLE HINGE

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4,237,577 12/1980 Chapel ..... 16/171 X

[76] Inventor: John L. Conn, P.O. Box 4501-Sta. B,  
Spartanburg, S.C. 29303

FOREIGN PATENT DOCUMENTS

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Primary Examiner—Werner H. Schroeder  
Assistant Examiner—Andrew M. Falik

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[58] Field of Search ..... 16/171, 176, 149, 169,  
16/266

[57] ABSTRACT

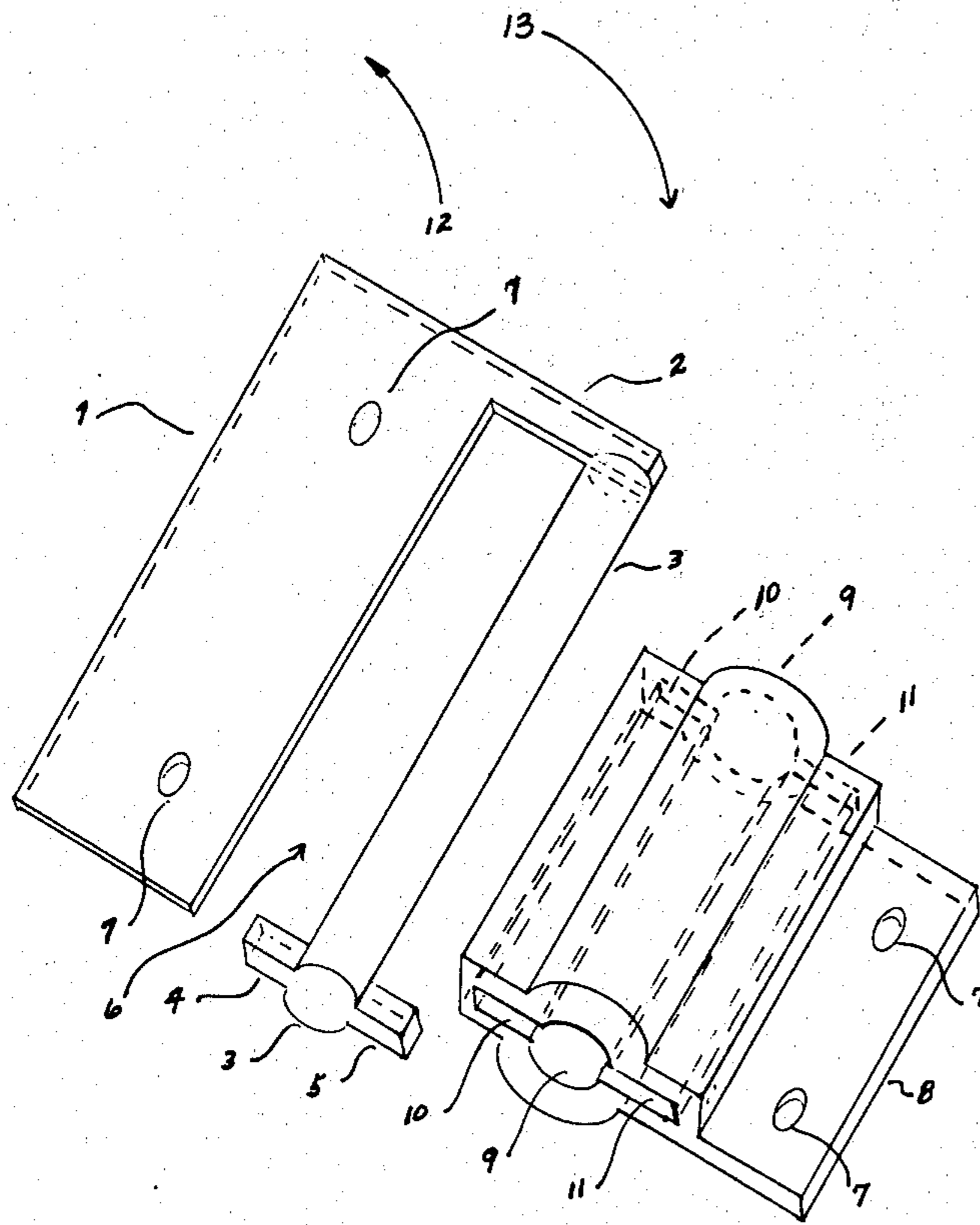
A hinge assembly comprising two interfitting portions wherein a cylindrical shaft connects to a hollow cylinder to construct an operative hinge assembly.

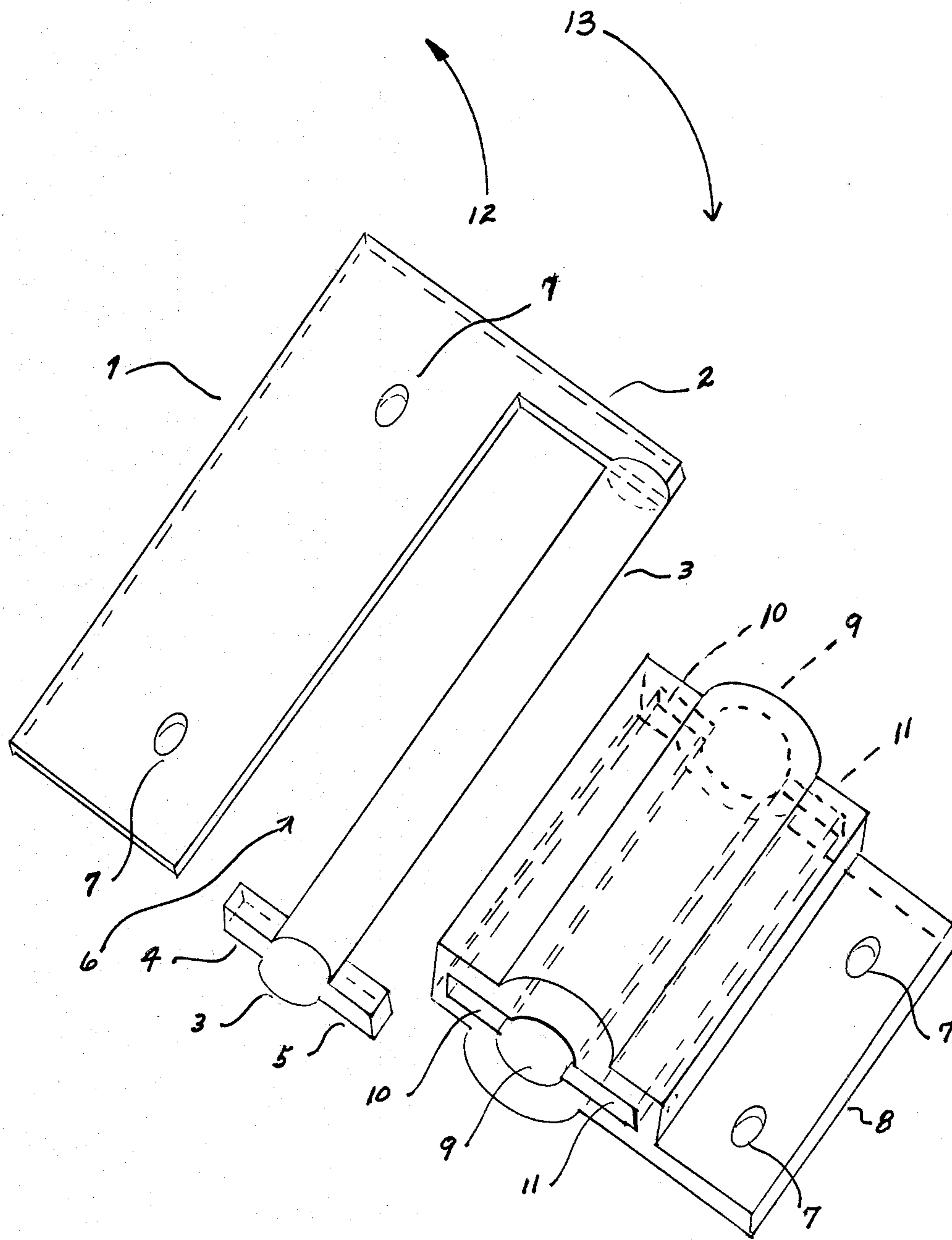
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1 Claim, 2 Drawing Figures





SEPARABLE HINGE

BACKGROUND OF THE INVENTION

Take apart hinges have been known for years how-  
ever the construction of a two piece hinge that is prefer-  
ably constructed from molded plastic where one piece  
includes a hollow cylinder and the pintle shaft portion is  
an integral part of the second piece, and wherein the  
two pieces can be disassembled by a specific shaft align-  
ment is believed to be novel.

BRIEF SUMMARY OF THE INVENTION

It is therefore a primary object of this invention to  
provide a hinge assembly whereby the one shaft section  
of the hinge can be molded as an integral part of the  
work piece and the other housing section of the hinge  
can also be molded as an integral part of the other con-  
necting work piece.

It is another object to provide a connecting hinge  
assembly whereby the two hinge sections can be joined  
together to construct an operative hinge assembly by  
properly positioning of the two hinge parts.

It is another object of the present invention to pro-  
vide a hinge assembly in two parts that can be con-  
nected and dis-connected by properly positioning  
rather than by the conventional method of screw con-  
necting the hinge to the work pieces.

It is another object to provide an inexpensive hinge  
assembly that can be molded into the work pieces and  
then joined together which has many applications in the  
plastic molding industries.

BRIEF DESCRIPTION OF THE INVENTION

The accompanying drawings, which are incorpo-  
rated in and constitute a part of this specification illus-  
trate one design of the invention and, therefore with a  
description serve to explain the principles of the inven-  
tion.

FIG. I is a view of the shaft section of the hinge. (The  
male section of the hinge).

FIG. II is a view of the shaft's housing section of the  
hinge. (The female section of the hinge).

DETAILED DESCRIPTION OF THE  
INVENTION

Referring now to the drawings and more particular to  
FIG. 1 which represents the male or shaft section of the  
hinge having a flat rectangularly shaped base plate (1)  
with screw holes (7) so to affix to a work piece by  
screws and having an extended arm (2) that connects to  
a solid cylindrical shaft (3). The shaft (3) extending

parallel to the base plate's (1) opposite end area and said  
shaft's end area having external keys (4 and 5) located  
on the shaft's end area that are positioned diametrically  
opposite each other, said shaft (3) and base plate (1)  
being in the same plane. The shaft (3) being extended  
from the base plate (1) forming a rotating area (6) for  
the shaft's housing (9) to revolve almost 360 degrees in  
a clockwise (13) or counter-clockwise (12) direction.

The other part of the section of the hinge as shown in  
FIG. 2 represents the female section of the hinge having  
a hollow cylinder (9) that is larger in circumference  
than the shaft (3) and said cylinder (9) having linear, and  
internal keyway grooves (10 and 11) that are located  
diametrically opposite the cylinder (9), said grooves  
being larger in area than the shaft's (3) external keys (4  
and 5) and said cylinder (9) with grooves (10 and 11)  
being joined to a flat rectangularly shaped base plate (8)  
with screw holes (7). The length of the internal cylinder  
(9) with grooves (10 and 11) is smaller than the length of  
the shaft (3) so that the shaft's housing (FIG. 2) can be  
positioned over the shaft (FIG. 1) whereby the shaft's  
housing (9) will rotate around the shaft (3) to construct  
a hinge assembly.

When the housing (FIG. 2) is rotating around the  
shaft (3) it is unlikely that the housing (9) will slide off  
the shaft (3) since the housing must be in the stopped in  
an aligned position with the keys in order to disconnect.

Be it noted that when these two section of the hinge  
are molded or constructed into the work pieces as an  
intergal part that the base plates (1 and 8) will not be  
necessary.

While various designs may be made in the construc-  
tion of this invention it is hoped that such changes will  
not alter the spirit and scope as is defined by the claims.

What is claimed:

- 1. A hinge assembly comprising two interfitting por-  
tions wherein the first portion includes a first base plate  
having an arm extending from one side that integrally  
connects to a first end of a cylindrical shaft, said shaft  
extending parallel to said base plate's one side and hav-  
ing a second free end with external keys thereon, said  
shaft and base plate being coplaner; and the second  
portion including a hollow cylinder affixed to a second  
base plate with the longitudinal axis of said cylinder  
being substantially coplaner thereto and wherein said  
cylinder includes internal keyway grooves adapted to  
slidingly receive the shaft's external keys, with the  
length of said cylinder being less than the length of said  
shaft and said shaft being sufficiently spaced from said  
base plate edge to allow said second portion to rotate  
almost 360 degrees around said shaft.

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